MISSOURI HEALTH BULLETIN

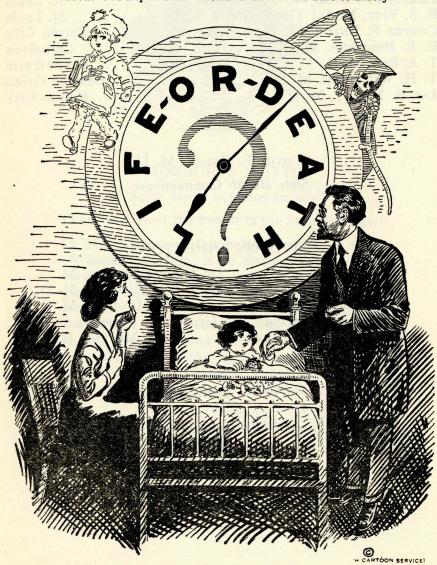
THE STATE BOARD OF HEALTH OF MISSOURI JEFFERSON CITY

Vol. 1, No. 1 JANUARY, FEBRUARY and MARCH, 1924

New Series

"SUSPICIOUS SORE THROAT?"—ACT QUICKLY

Treat It as Diphtheria. Better to Err on the Side of Safety



Antitoxin Will Cure—If Given Early
A Few Hours' Delay in Giving Antitoxin May Mean Death
DIPHTHERIA NUMBER

THE STATE BOARD OF HEALTH OF MISSOUR I.

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CORTEZ F. ENLOE, M. D. State Health Commissioner

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Statistician

G. A. THIELMAN

Assistant Epidemiologist Ross Hopkins, A. B., M. D.



MISSOURI'S MOTTO

"Salus populi suprema lex esto"

(The Welfare of the People is the Supreme Law)

THE purpose of this bulletin, which is to be issued monthly, is to disseminate informamation regarding the prevalence of preventable diseases and the best methods of their suppression, to record progress in sanitation and the control of preventable diseases and to acquaint the profession with the services they may obtain from the State Board of Health; all with the aim of bringing about better health protection for the people of Missouri.

CORTEZ F. ENLOE, M. D. State Health Commissioner.

HEALTH NEWS.

2,000 Cases of Diphtheria and 392 Resultant Deaths Were Reported in the State Last Year.

Why should innocent children be allowed to suffer and die from diphtheria? Toxin-antitoxin will prevent the disease and antitoxin will cure the suffering individual if given early.

Lovers of children should insist on their being immunized

against this disease.

Don't take any chances with a sore throat. Secure sterile swabs and culture tubes from your Deputy State Health Commissioner and obtain specimens and send them to the Laboratory at Jefferson City, or your nearest laboratory.

The State Board of Health Laboratory at Jefferson City is at your service.

A copy of the new Missouri Health Manual, outlining Missouri Health Laws and Regulations of the State Board of Health, will be sent on application.

Annual registration of physicians and midwives with the local registrars of Vital Statistics is required by the State law. Co-operation of the physicians in complying with this law will assist greatly in the medical survey now being conducted. There is no fee for registration. See Revised Statutes 1919, Sec. 5811.

Since the first of the year two towns have already made use of the emergency water supply sterilization plant maintained by the Sanitary Engineering Division, to check an epidemic of water-borne diseases or to prevent the possibility of one occurring where a water supply is found unsafe. If there is any doubt regarding the quality of your city water, request a sanitary survey and analysis.

The average Druggist is very particular that his supply of candies and cigars are kept at a proper temperature; neither one

save lives. But he allows his Vaccine Points, Antitoxins and other Biologics to stay upon the shelf depending upon the time limit stamped on the package for his protection, which means nothing unless they are kept at proper temperature.

Do like the Cole County Medical Society has done. Refuse to buy Biologics from any druggist that does not keep them in

a refrigerator, properly iced.

Biologics not properly kept are not potent. Many lives have been lost from Diphtheria although the proper amount of Antitoxin had been given, but it was kept on a shelf.

Insist on your Druggist buying a refrigerator and a new supply of Biologics, he can send in the old supply and receive credit.

THE DIFFERENTIAL DIAGNOSIS OF DIPHTHERIA.

W. T. Harrison, P. A. Surgeon, Hygienic Laboratory, U. S. Public Health Service.

It is now generally acknowledged that bacteriological methods offer the only certain means for the diagnosis of diphtheria, since other inflammatory conditions of the mucus membrane of the throat may readily simulate the diphtheretic condition even to the formation of a membrane which will deceive the most skillful clinician. However, in certain cases it is imperative that at least a provisional diagnosis be made without the delay incident to the demonstration of the diphtheria bacillus, since in many cases the physician does not see the patient until the disease is well established. Great attention should therefore be given to the symptoms in every case of sore throat, and on account of the time element, less dependence should be placed upon the laboratory, particularly in severe cases. It is not intended to detract from the importance of accurate laboratory diagnosis in all cases, but there are unquestionably many instances in which a curative dose of diphtheria antitoxin should be administered at the same time that the culture is taken.

In general, uncomplicated diphtheria will present signs of prostration out of proportion to the temperature and local condition of the throat. The patient will be weak, the face pinched and the respiratory and pulse rate will be higher than the temperature and duration of the illness would seem to warrant. Tonsilitis or septic sore throat both cause an immediate high temperature, usually higher than in diphtheria, the pain and tenderness in the throat are more marked, and headache and general discomfort more noticeable. Local swelling together with the pain make swallowing difficult and there may also be present a peculiar nasal quality to the voice which is due to the swelling of the throat.

Locally the appearance of the throat in diphtheria may vary from slight general redness and congestion in the early stages of the disease to later formation of a membrane sufficient to obstruct respiration with ulceration and necrosis of the underlying The membrane is usually described as dirty gray in color with regular edges but is not by any means always as de-The color may vary from gravish white to yellow, the edges are usually thinner than the central portion and they may be very irregular. It may first appear as discrete spots on the tonsil, pillars or wall of the pharynx, collescing as the disease progresses. The membrane usually gives the impression of being in the mucosa and not on it and a bleeding surface is left when it is forcibly removed. Pseudo-diphtheretic membranes are sometimes formed by pyogenic organisms which may closely simulate the true diphtheria membrane even to the bleeding surface on forcible removal, and it is in these cases that the question of differential diagnosis is raised and the need of specific treatment is to be decided. It is safe to assume that sore throat with membrane formation, moderate temperature, rapid pulse and prostration in a child should be considered for the purposes of treatment as diphtheria until such diagnosis is disproved. This is particularly true if the slightest mechanical obstruction to respiration is evident, regardless of the absence of previous cases in the neighborhood.

The throat in tonsilitis will usually show redness and congestion surrounding enlarged tender tonsils which may or may not show yellowish spots covering infected crypts. These spots are usually readily removed with an applicator but are sometimes quite closely adherent. The infection is due to pyogenic organisms and may extend to the surrounding tissues resulting in peritonsillar abscess which can readily be recognized on palpating posterior to the tonsil and by displacement of tonsil and uyula toward the opposite side.

Septic sore throat is very similar to tonsilitis in appearance; the pharyngeal mucosa is more diffusely inflamed, the most striking difference being the constant enlargement of the cervical lymph glands on one or both sides. This condition is usually met with in epidemics more or less sharply defined, and is due to streptococcic infection.

Where laboratory facilities are available for diagnosis, cultures should always be made when the patient is first seen. It is important that no antiseptic gargle or application to the throat be used for several hours previous to taking the swab for inoculation of tubes. The swab should be rubbed over the surface of the tonsil and pharyngeal wall giving particular attention

to suspicious surfaces and extending into the lower part of the pharynx as far as possible. By stimulating reflex action with the tongue depressor the lower part of the pharynx may readily be brought into view. The swab should then be gently rubbed over the entire surface of a Loeffler slant, rotating the swab to bring its entire surface in contact with the media. Both swab and slant should be submitted to the laboratory for examination. In isolated districts, particularly if a considerable period will elapse before sending the culture to the laboratory, it is well to place the tube in an inside pocket of the clothing, utilizing the body heat to incubate the organisms. This will frequently shorten the time between inoculation and examination of the tube.

The culture is extremely important for accurate differentiation of diphtheria from other conditions, but the tendency to rely entirely upon the laboratory for diagnosis should be discouraged. Many laboratory procedures may be employed in the diagnosis of disease without danger to the patient from the necessary delay, but this delay incident to laboratory diagnosis of diphtheria may readily mean the difference in some cases between recovery and death, or at least late paralysis, due to the rapid production and absorption of diphtheria toxin during the interval.

It should be remembered that the responsibility for prompt diagnosis and treatment rests entirely with the clinician and can not be delegated to the more or less distant laboratory. Then, too, quite frequently first cultures in frank diphtheria are negative in the hands of competent bacteriologists due to improper technic in making cultures, previous use of antiseptics in the throat, overgrowth of other organisms, or finally negative results which can only be explained by failure of the diphtheria bacillus to grow.

For the reasons outlined above it should be emphasized that the laboratory should be used only as an aid to clinical diagnosis and to determine when it is safe to release from quarantine, and on the other hand, that the clinical senses should be more carefully exercised in an effort to recognize the disease more promptly in order that full benefit may be derived from the specific treatment at hand.

The results of a mistaken positive diagnosis of diphtheria with unnecessary administration of antitoxin in an acutely ill patient fades into insignificance when compared with the frequent grave results following a negative clinical diagnosis in a masked case which is later positive on laboratory examination, with no antitoxin during the interval while awaiting the laboratory report.

UNIVERSAL DIPHTHERIA IMMUNIZATION NOW PRACTICAL.

With the original formula of toxin-antitoxin, containing three L plus doses of toxin, Park demonstrated conclusively the value of diphtheria immunization. In over 90 per cent of the children immunized in the public schools of New York City (some 500,000 children) the immunity lasted over six years and possibly will continue throughout life. As it was found that the original formula was impractical for universal immunization because of the severe reactions produced in adults, Park and his co-workers at the Research Laboratory of the New York City Department of Health modified the formula to contain only one-tenth L plus dose of toxin. Park's studies show that this new formula produces an immunity equal to that established by the former product, and that no severe reactions occur even in older children and adults. Hence this improved product will permit of universal immunization against diphtheria.

Immunization with toxin-antitoxin consists of three doses injected deeply into the subcutaneous tissue of the upper arm, over the insertion of the deltoid muscle. The doses are given at intervals of one week, each dose consisting of 1 cc, both for children and adults.

Diphtheria immunization is especially useful for:

- (a) All children from six months to six years of age. During this period the susceptibility to diphtheria as well as the mortality is greatest. By systematic immunization of children between these ages diphtheria could be stamped out in a few years.
- (b) School children from six to nineteen years of age. These usually come in contact with diphtheria each year and carry the infection home. No logical or practical method of eradicating diphtheria can be carried out without including the routine immunization of school children.
- (c) Those adults who come in contact with diphtheria and are constantly exposed to the infection, including physicians, nurses, and hospital attendants.
- (d) Persons who, due to exposure or infection, have received treatment with diphtheria antitoxin as a curative or prophylactic measure. Four weeks after the antitoxin is given immunization of such persons should be carried out with toxiantitoxin.

EXTRACT FROM HEALTH MANUAL

Diphtheria (Membranous Croup)

Rule 24. Diphtheria or membranous croup is hereby declared to be a dangerous communicable disease and subject to the following procedure:

a. Premises shall be placarded.

- b. The patient shall be isolated until all discharges from the nose, throat, ears, ulcers, abscesses or wounds have ceased, and until temperature has been restored to normal; provided, that no patient shall be released from isolation until two successive cultures from throat and nose taken at least twenty-four (24) hours apart contain no diphtheria bacilli, such cultures not to be taken until at least nine (9) days after onset, and provided further, that when patients or their proper guardians refuse to permit the taking of cultures, or when circumstances in rural communities make such procedure impracticable, the minimum quarantine period shall be not less than fourteen (14) days from the date of onset of the last case.
- c. All persons in an infected household shall be confined to the premises unless proven not to be infectious by at least one negative culture from nose and throat, in which cases they may be permitted to take up a residence elsewhere.
- d. All contacts with a case of diphtheria shall be quarantined for a period of seven days unless proven not to be infectious by at least one negative culture from nose and throat. The health officer shall determine what constitutes contact in each individual instance.
- e. The sale or distribution of milk or food from infected premises or by persons exposed to infection is expressly prohibited.
- f. Concurrent disinfection is required of all discharges and of all articles which have been in contact with the patient. Terminal disinfection is required.

Note.—It is recommended that wherever possible the Schick test be performed upon all diphtheria contacts to determine who is susceptible to the disease. All susceptibles, and in the absence of the Schick test, all exposed persons, should receive promptly a prophylactic injection of diphtheria anti-toxin.

Sterile swabs and culture tubes may be obtained from your Deputy State Health Commissioner or from the State Board of Health Laboratory, Jefferson City, Missouri, and specimens may be sent there for examination.

MEASLES.

307 Deaths and 21,334 Cases of Measles Were Reported Last Year. There is an Epidemic of Measles Over the State at This Time.

The attention of physicians, health commissioners and teachers is directed to the rules and regulations of the State Board of Health of Missouri, in regard to this dangerous contagious disease. Inasmuch as the spread of the infection occurs during the period of catarrhal symptoms, teachers should exclude all suspicious children with symptoms of colds or other symptoms indicating infection. If in doubt the teacher may have the assistance of the health officer. Every case of measles should have medical attention to prevent complications, such as bronchitis, pneumonia, otitis media, etc. According to the regulations of the State Board of Health of Missouri, Rule 29, as follows:

Measles is hereby declared to be a dangerous communicable disease and subject to the following procedure:

(a) The premises shall be placarded.

(b) The patients shall be confined to the premises for a minimum period of five (5) days after the appearance of the rash and until all discharges from the nose, throat and ears have disappeared and cough has ceased, and until fever has disappeared.

(c) Susceptible children and adults in infected households shall not attend school or public gatherings for fourteen (14) days from the last exposure. Immune contacts are subject to

no restrictions.

(d) Concurrent disinfection of all articles soiled with nose and throat secretions and terminal cleansing of the house shall be practiced.

SEPTIC SORE THROAT.

Septic sore throat usually manifests itself as a severe tonsilitis or other form of throat inflammation and is often attended with complications which are dangerous and at times fatal. When septic sore throat assumes epidemic proportions, an infected milk supply can generally be found as the agency through which the epidemic started. The epidemic is usually "explosive in character," and affects fully fifty per cent of the consumers of the infected supply. As in all milk-borne epidemics, children are more often attacked than adults. In nearly all cases the infection can be traced to a single dairy, and even the particular agency, man or cow, responsible for the infection, can be isolated.

Septic sore throat, contracted from infected milk, is caused by a specific microorganism, streptococcus of pyogenic variety, entering milk from either human or animal sources. Men and animals are about equal factors in the infection of milk with this specific organism. When of human source, the organism is introduced into the milk in handling same by a person suffering with a throat infection by contact or droplets sprayed in coughing and sneezing. The employment of infected cloths in the wiping and cleansing of cows' udders preparatory to the milking process is also often a factor in introducing organism into the milk. Furthermore, the infection may be conveyed directly to the cow's udder from a person suffering with a form of "streptococcus sore throat."

The organism of septic sore throat from animal sources enters milk by reason of inflammatory processes existing in the milk glands of cows known as "Streptococcus Mastitis." This organism sets up a severe inflammation in the milk duct with a discharge of pus material, which is secreted with the milk. cow may be suffering from this particular inflammatory condition without visible manifestations recognized by the average layman or dairyman. In this condition a cow discharges virulent pyogenic streptococci into the milk being secreted within its glands. The only knowledge of its probable presence would be the development of an epidemic of sore throat among persons drinking the milk. The inflammatory condition of the milk glands may be quite common in herds of dairy cattle where conditions surrounding the stabling, care and pasturing give rise to injuries of the low hanging udder and teats, due to contact with fence wire, brush, fences and other objects encountered in the course of lying down on the field or in the stable. A single cow with an infected udder will contaminate an entire milk supply from a dairy when her milk is mixed with that of all others in the herd.

The disease septic sore throat may present a severe clinical type and result in death. Apparently it is not readily communicable from person to person. The inflammation and swelling of the lymphoid structures of the throat and mucus membranes are severe; edema is a feature and many cases present pseudomembranous formation and other indications of virulent

infection. There is a sharp febrile reaction, prostration and sometimes delirium. The duration of the disease may be prolonged and complications occur in about twenty-five per cent of the cases. These consist mostly of enlarged regional lymph nodes, which may suppurate, abscesses, anthritis, endocarditis, pyemia, peritonitis, erysipelas, pneumonia, acute nephritis, otitis, and other sequelae, indicating the invasion of the blood with a virulent streptococcus.

During the past year, about August, 1923, and epidemic of septic sore throat was reported in Portland, Oregon. Approximately five hundred cases were reported in this epidemic with a mortality of about ten per cent. The cause, an infected milk supply, was traced to a single cow in the dairy supplying all of the affected consumers.

The State Board of Health of Missouri receives valuable co-operation and assistance from the United States Public Health Service, International Health Board and Children's Bureau of the United States Department of Labor. The United States Public Health Service co-operates in the support and supervision of the full-time county health units, the control of Venereal Diseases and Milk Surveys and the trachoma control work in both hospital and clinics.

The International Health Board have contributed funds and furnished personnel to assist in the Malaria survey in Southeast Missouri, the Laboratory at Jefferson City, and the support of full-time county health units.

The Children's Bureau of the Department of Labor is assisting the child hygiene work in birth registration, the healthmobile and child health demonstration work.

SERVICES OF THE STATE BOARD OF HEALTH OF MISSOURI.

- 1. Furnish a trained epidemiologist to assist local health authorities in the suppression of epidemics.
- 2. Maintain a public health Laboratory at Jefferson City for examination of specimens.
- 3. Furnish free culture tubes, slides and sample containers (through Deputy State Health Commissioners, or direct from Laboratory).
- 4. Maintain a stock of biologics at Jefferson City for emergency distribution.
- 5. Furnish free salvarsan to physicians and local clinics for indigent venereal patients.
- 6. Maintains a special hospital at Rolla, Missouri, in co-operation with the U. S. Public Health Service, for the treatment of the more severe types of trachoma (granulated eyelids).

- 7. Maintains a traveling field hospital unit to conduct clinics in various parts of the State for the treatment of the milder types of trachoma.
- 8. Investigates existing and proposed public water supplies and sewage disposal projects.
 - 9. Investigates public milk supplies.
 - 10. Promotes sanitation of towns.
 - 11. Promotes sanitation of rural schools.
 - 12. Secures the correction of public sanitary nuisances.
 - 13. Assists in mosquito eradication.
- 14. Apply measures to prevent and suppress diseases of infancy and childhood.
 - 15. Conduct physical examinations of school children.
 - 16. Distribute literature on maternal and child care.
- 17. Promotes the establishment and support of full-time county health departments, and the employment of public health nurses.
- 18. Publishes a monthly bulletin containing current public health information.
 - 19. Publishes periodicals on public health subjects.
- 20. Furnishes lectures and public health films for medical societies and community meetings.
 - 21. Compiles permanent records of births and deaths.
 - 22. Studies the prevalence of reportable diseases.

REQUESTS FOR ANY OF THE ABOVE SERVICES WILL BE GIVEN PROMPT ATTENTION.

HEALTH NEWS.

The number of cases of contagious diseases reported to the central office each month will be of interest.

Here is the tabulation for January, 1924.

	No.	No.
Morbidity Reports	Cases	January, 1924 Cases
Anthrax	1	Poliomyelitis 0
Chicken pox	303	Pneumonia
Diphtheria	352	Rabies 0
Epidemic or Septic Sore Throat	5	Scarlet Fever 501
Glanders	0	Smallpox
Influenza	100	Tetanus 3
Measles	2635	Trachoma 9
Meningitis (Cerebrospinal)	7	Tuberculosis
Mumps	126	Typhoid Fever
Ophthalmia Neonatorum	2	Whooping Cough

Doctors, please do not neglect to report your cases of contagion. We want to help your locality. If you report, we have an index of contagion and thus can observe where we can be of service in assisting with preventive measures.

Did you know that the State of Missouri is not in the Birth Registration Area of the United States Census Bureau? If all physicians will co-operate with the State Board of Health by reporting all new births and sending in delinquent reports, Missouri will be admitted to this area this year.

SMALLPOX INCIDENCE LOW IN 1923.

It is gratifying to know that the 1923 smallpox incidence in Missouri was approximately 50 per cent below that for 1922. The exact number of cases reported for the two years respectively were 607 and 316. This reduction has been due to the large number vaccinated and also the efficient method of quarantining.

A contagious disease chart is being furnished by the State Board of Health of Missouri for posting in every school in the state.

Be sure and use Biologics marked "The State Board of Health of Missouri." They are just as efficient and much cheaper.

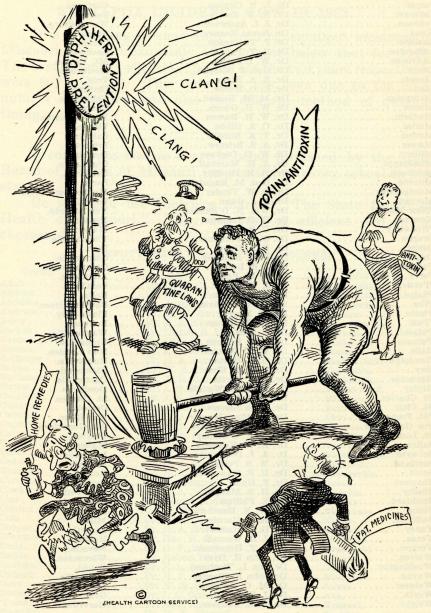
DEPUTY STATE HEALTH COMMISSIONERS.

County.	Name.	Address.
Adair	. Dr. C. M. C. Wilcox	. Kirksville.
Andrew	Dr. V. R. Wilson	. Rosendale.
	Dr. Austin McMichael	
Audrain	Dr. R. W. Berry	. Mexico.
	Dr. S. A. Newman	
	Dr. Claude E. Duckett	
	. Dr. Chas. E. Powers	
	Dr. J. A. Logan	
	Dr. C. A. Sanders	
	Dr. W. A. Norris.	
	Dr. A. E. Holley	
	Dr. I. N. Barnett	
	Dr. J. E. Gartside	
	Dr. C. H. Christian	
	Dr. G. A. Moulder	
	Dr. E. R. Schoen	
Carroll	Dr. H. B. Scovern	Cornellton
	Dr. T. W. Cotton	
	Dr. H. G. May	
	Dr. H. A. Simerall	
	Dr. B. Hughes	
	. Dr. F. Hedgpeth	
	. Dr. F. A. Johnson	
	.Dr. Burton Maltby	
	.Dr. C. W. Chastain	
	.Dr. H. T. Leach	
	.Dr. G. A. Russell	
	.Dr. Geo. W. Reeves	
	.Dr. O. V. Hembree	
	.Dr. Robert Richey	
	.Dr. P. L. Gardner	
	.Dr. H. P. Yeater	
	.Dr. W. E. Rudd	
	.Dr. J. L. Gentry	
*Dunklin	.Dr. E. L. Spence	. Kennett.
Franklin	.Dr. W. E. Kitchell	St. Clair.
Gasconade	Dr. E. L. Haffner	. Hermann.
	.Dr. E. M. Lucke	
	.Dr. U. F. Kerr	
	. Dr. S. Sheldon	
	.Dr. W. W. Vandivert	
	. Dr. J. G. Beaty	
Hickory	.Dr. J. S. Johnston	. Wheatland.
Howard	.Dr. V. Q. Bonham	Fayette.
Howell	.Dr. J. W. Bingham	. West Plains.
	.Dr. G. W. Farrar	
Jackson	.Dr. J. W. Greene	Independence.

County.	Name.	Address.
Jasper	Dr. L. B. Clinton	Carthage.
Jefferson	Dr. N. W. Jarvis	Festus.
Knov	Dr. J. I. Anderson Dr. James Keaney	Warrensburg.
Laclede	Dr. P. Thompson	Lebanon.
Lafayette	Dr. B. T. Payne	Lexington.
Lawrence	Dr. W. I. Fulton	Mt. Vernon.
Lewis	Dr. Geo. P. Knight	Monticello.
Linn	Dr. E. A. Hicks	Linneus
Livingston	Dr. M. M. Russell	
Macon	Dr. W. H. Gooch Dr. W. H. Barron	Elmer.
Madison	Dr. W. H. Barron	Mine Lamotte.
	Dr. C. A. Gibbs	
	Dr. 1. A. Roselle	
	Dr. W. D. Dickson	
Mississippi	Dr. A. H. Marshall	
Moniteau	Dr. H. R. Popejoy	
Montgomory	Dr. Geo. M. Ragsdale Dr. E. W. Tinsley	Paris.
Morgan	Dr. A. J. Gunn	Versailles
*New Madrid	Dr. Wm. N. O'Bannon	New Madrid.
	Dr. R. C. Lamson	
	Dr. C. P. Fryer	
Oregon	Dr. G. C. Plummer Dr. H. S. Gove	Thomasville.
	Dr. P. E. Bushong	
Pemiscot	Dr. J. B. Luten	Caruthersville.
Perry	Dr. E. M. Popp	Altenburg.
	Dr. J. W. Boger	
	Dr. W. S. Smith	
Platte	Dr. W. Murray	Platte City.
*Polk	Dr. W. Murray	Bolivar.
Pulaski	Dr. L. Tice	Waynesville.
Putnam	Dr. J. H. Holman	
Randolph	Dr. W. T. Waters Dr. O. F. Hatton	Huntsville
Ray	Dr. Thos. F. Cook	Richmond.
Reynolds	Dr. J. R. Pyrtle	Centerville.
Ripley	Dr. M. V. B. Waddle	Doniphan
St. Charles	Dr. O. B. Ilch	Oscaola
	Dr. Bradford Massey	
Ste. Genevieve	Dr. C. J. Clapsaddle	Ste. Genevieve.
St. Louis	Dr. W. F. O'Malley Dr. R. W. Kennedy	
Saline	Dr. R. W. Kennedy Dr. A. J. Drake	
Scotland	Dr. W. S. Petty	Memphis
Scott	Dr. U. P. Haw	Benton.
Shannon	Dr. F. Hyde	Eminence.
	Dr. H. S. Maupin	
Stone	Dr. E. Phillips	Galana
Sullivan	Dr. W. N. Deatherage Dr. R. L. Garner	
Taney	Dr. O. C. Harned	Forsyth.
Texas	Dr. J. R. Womack	Houston.
Woman	Dr. J. T. Hornback Dr. John H. Dyer	Nevada.
Washington	Dr. Jos. L. Thurman	Potosi
Wayne	Dr. John F. Wagner	Greenville.
Webster	Dr. M. G. Roberts	
Worth	Dr. J. K. Phipps Dr. B. E. Latimer	Grant City.
Wright	Dr. B. E. Latimer	

^{*}Full-time County Health Departments.

"HEALTH IS THE STATE'S GREATEST ASSET" T-A Rings the Bell—Every Time



T-A (Toxin-Antitoxin) is an absolute preventive for diphtheria. Its immunizing effect is lasting—its general use would banish diphtheria from Missouri

Call on us for any health service. We will do our best

THE STATE BOARD OF HEALTH OF MISSOURI JEFFERSON CITY

MISSOURI HEALTH BULLETIN

THE STATE BOARD OF HEALTH OF MISSOURI JEFFERSON CITY

Vol. 1, No. 2

April, May and June, 1924

New Series

Trachoma an Important Public Health Problem and Methods Adopted For the Control of This Disease in Missouri



Trachoma Hospital, Rolla, Missouri. Established July 24, 1923.

THE STATE BOARD OF HEALTH OF MISSOURI.

EMMETT P. NORTH, M. D., President	St. Louis
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State Health Commissioner

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Statistician

G. A. THIELMAN

Field Epidemiologist

Ross Hopkins, A. B., M. D.





Two photographs of a typical trachoma sufferer. This man, 28 years of age, suffered a number of years from this disease. Photophobia (pain from light) was so intense that for years he has not been able to bear the light of day. His wife or one of his four children led him around. He was drawing a blind pension at the time he applied for treatment.

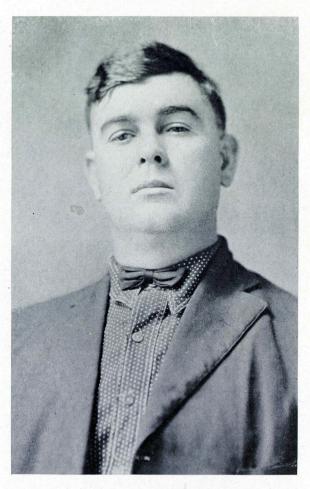
Trachoma or Granulated eyelids was found to be prevalent by a survey made in 1922, throughout the southern part of Missouri, and extending with less frequency in a number of the northern counties. A tabulation of the Blind pension rolls revealed the fact that approximately 1,400 pensioners were blind as a result of Trachoma. This disease being much more widespread in the state than had been previously known, the State Board of Health of Missouri immediately took steps to complete the tabulations and outline a plan for the control, treatment and prevention of this contagious

or catching disease, which was found to cause twenty per cent of the total blindness in the state.

Definite methods were established for this work, namely:

TRACHOMA HOSPITAL.

The State Board of Health of Missouri, with the co-operation of the Surgeon General, U. S. Public Health Service, established a hospital at Rolla, Missouri, with a 24-bed capacity, for treating Trachoma only. This hospital was opened to patients on July 24, 1923, and the entire



This is a likeness of the same shown in Nos. 2 and 3 after he had been cured of trachoma by two months' treatment in the hospital at Rolla. He is now at work and happy. He can enjoy the light of day and support his family. Life which was once a burden is now a pleasure.

bed capacity was taken. It has since that time been completely filled and has a large waiting list of applicants.

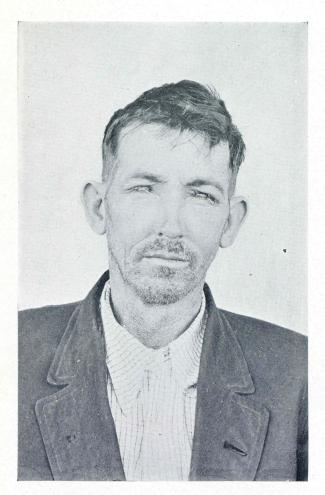
TRAVELING TRACHOMA CLINICS.

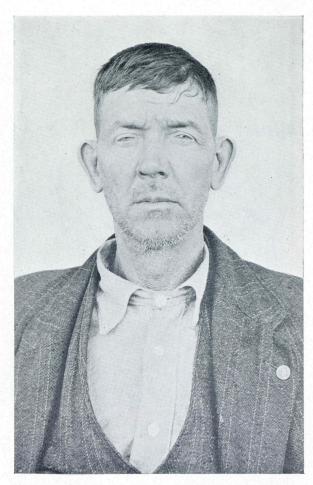
Twenty-five diagnosis and treatment clinics were held, where the milder cases of Trachoma were treated and in most instances cures resulted. The State Board of Health conducted these clinics with the co-operation of the U. S. Public Health Service, and the citizens of towns and cities where the clinics were held. Thirty bed hospital equipment was established and the clinics usually lasted a period of

three days. A corps of three nurses and one physician was kept constantly in the field and examined more than 40,000 persons during the summer of 1923. 1,114 Trachoma cases actually attended the twenty-five clinics which were conducted from September 22 to December 19. 546 cases were operated and many sent to the hospital at Rolla. More than 40 counties in Missouri were reached by this survey.

EDUCATIONAL.

In addition to the hospital and clinics an educational campaign was constantly





Brothers who have had trachoma for many years and have spent all of their money in an effort to find a cure.

carried on. As the etiology of this disease is still in doubt, the method of transmission from one person to another still lacks positive demonstration. However, it is generally conceded that the disease is transmitted from the trachomitous eye to the non-trachomitous eye, through the use of the common towel, wash basin, bed linen, playing blind folding games and other means of close contact. A large amount of printed literature was also distributed to persons who attended the clinics.

TAX PROBLEMS.

The Blind pension rolls, 1922, increased to a much larger number of ap-

plicants for the blind pension than had been anticipated by the legislature, thus bringing about a most acute crisis in tax problems. Approximately 6,000 Missouri citizens had made application for a blind pension and had met the requirements of the law. At the rate of \$300 per person per annum the total claims would be one million eight hundred thousand dollars, therefore being largely in excess of the amount produced by the 2 cents on \$100 valuation Blind pension tax. In view of the fact that this disease seemed to be on the increase and that the future held out no hope for the infected citizens and in view of the future fact that the proper



Group of 22 patients at the hospital at Rolla, Missouri, all under treatment for trachoma.

treatment of this disease usually brought about a cure, the State Board of Health made an effort to bring this treatment in reach of the citizens of the most moderate circumstances. One of the handicaps to treatment was found to be that a number of the trachoma patients lived in rural sections far removed from railroad facilities and were hampered usually by the lack of available funds to take treatment in hospitals in cities. This was overcome by transporting a temporary hospital to remone districts. Many patients were treated in these clinics, who had not seen daylight for months, being compelled to shield their eyes from light of day because of the pain occasioned by the admission of light. Most of the advanced cases also had corneal ulcers, complications and pannus. These cases

are not isolated cases but are instances of many pathetic cases, the results of this dangerous though preventive disease. Many such cases as the following might be recited:

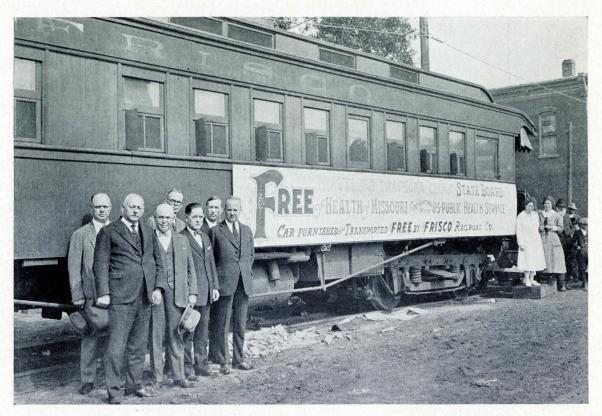
A little girl, age 14, had never attended school, and of course was unable to read or write, going about shielding her eyes from light. Parents, brothers and sisters also had trachoma. This girl was placed in the hospital and her sight will be restored so that she will be able to become a valuable citizen.

A man, married, age 28 years, with a family of five, was found to be unable to look after his own wants and those of his family, was led about by his brother-in-law. This man was on the blind pension rolls. He was sent to the hospital and in three months time was able to return to





Two_views of Trachoma Clinic and examinations being conducted in Frisco Car.



Trachoma Hospital Car and its Staff.

his family, no longer requiring the pension, as he was able to provide for his family.

Many pitiful cases were seen where the vision was completely destroyed from trachoma, which emphasizes the prevention and early treatment. With the cooperation of the people this disease can be stamped out of the state in a few years if the legislature supplies sufficient funds to continue the work already begun.

RAILROAD ASSISTANCE.

Both the Missouri Pacific and the Frisco Railroad Companies rendered assistance by the loan of the private car in which the personnel and the hospital equipment were transported from place to place.

SCIENTIFIC RESEARCH.

The State Board of Health requested the U. S. Public Health Service, Washington, D. C., to establish a branch of the Hygienic Laboratory at Rolla, Missouri, in conjunction with the Trachoma Hospital to do scientific research on the cause of this dread disease of the eyelids. This laboratory is now in operation, having been established about March 15. The work contemplated will be mainly concerned with the following:

- 1. Attempt to reproduce the disease in animals with material obtained from typical cases of trachoma.
- 2. Isolation and culture of causitive virus or organism.
- 3. Reproduction of disease in animals with cultures thus obtained.



Examining Room, Lebanon Clinic.

The Rolla Hospital will furnish an abundance of clinical material in all stages of trachoma.

METHODS OF TREATMENT.

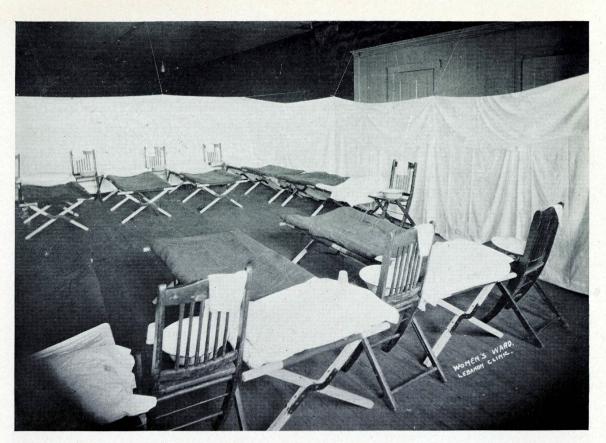
The method of radical cure as practiced by Dr. John McMullen, Surgeon, U. S. Public Health Service, is surgical as well as medical. In the active causes the granulations are actually removed from the eyelids with one operation which occasionally must be repeated within one month or two, but in most cases one operation is sufficient. This if followed by medical treatment. In the advanced cases of Trachoma, where entropian has developed, the treatment is again surgical. Many thousand cases have been cared for in Trachoma Control Work in other states as well as Missouri, and the de-

velopment of operations has become a scientific procedure, so that definite results can be expected in almost all cases.

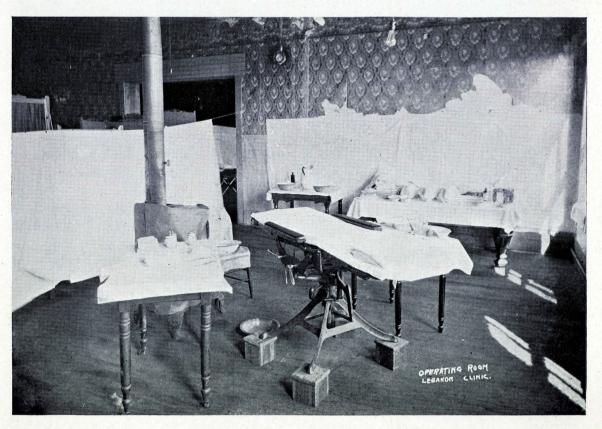
PUBLIC HEALTH MEASURE.

Trachoma then is not only a terrible handicap to the individual sufferer but is a Public Health Measure of great importance. Untreated, it remains a lifetime, a constant discomfort to the individual and a menace to his neighborhood and finally deprives him of his eyesight. Even after the sufferer has been rendered sightless by the disease, the Entropian Trichiasis and, etc., remain to harass the blind and add to their misery.

Compare this disease with Yellow Fever, Smallpox, and other acute conditions and they may be said to be kind to



Women's Ward, Lebanon Clinic,



Operating Room, Lebanon Clinic.

their victims, since they terminate in a in the surveys and reported by physicians short time and when recovery takes place of the state. Up to the time of the writing leave no bothersome sequal.

PREVALENCE OF TRACHOMA.

The State Board of Health has tabulations of 1,655 cases of trachoma found

in the surveys and reported by physicians of the state. Up to the time of the writing of this article 1,114 cases had received treatment in the clinics and 254 in the hospital and of course it is impossible to estimate the number treated by private physicians.

THE STATE BOARD OF HEALTH OF MISSOURI CO-OPERATING WITH THE UNITED STATES PUBLIC HEALTH SERVICE TWENTY-FIVE THREE-DAY TRACHOMA TREATMENT CLINIC.

Cortez F. Enloe, M. D., State Health Commissioner, Jefferson City.

No.	Place.	Date, 1923.	Number examined.	Number trachoma cases.	Number operations.	Estimated attendance.	Number examined preliminary survey.
	T -1	Sept. 22	480	111	67	600	1,380
1	Lebanon	Sept. 29	352	54	31	700	1,366
2	Marshfield	Oct. 6	257	34	8	400	817
3	Ozark	Oct. 10	159	46	24	167	4,500
4	Bolivar	Oct. 13	205	66	38	225	1,429
5	Ava	Oct. 17	196	34	23	245	820
6	Mountain Grove	Oct. 20	228	48	31	300	1,585
7	West Plains		235	37	$\frac{31}{22}$	246	1,385
8	Eminence		458	115	47	700	The state of the s
9	Jefferson City	Oct. 27		51	31	800	12,600
10	New Madrid	Oct. 29	300			A PARTITION OF THE	1,000
11	Eldon	Oct. 31	187	51	24	199	1,241
12	Versailles	Nov. 3	110	22	8	125	987
13	Joplin	Nov. 7	267	54	19	300	1,014
14	Galena	Nov. 10	119	16	3	130	753
15	Flat River	Nov. 12	153	30	17	225	153
16	Branson	Nov. 14	405	19	16	430	1,047
17	Poplar Bluff	Nov. 21	294	62	20	333	1,341
18	Dexter	Nov. 24	210	56	19	230	1,450
19	Fredericktown	Nov. 28	236	27	9	250	1,250
20	Jefferson City	Dec. 1	81	18	7	100	1,200
21	Salem	Dec. 5	128	19	14	200	385
22	Steelville	Dec. 10	60	15	11	100	276
23	Brumley	Dec. 14	293	36	13	350	588
24	Trenton	Dec. 17	151	34	14	175	1,130
25	Kennett	Dec. 19	282	59	30	250	1,122
	Totals		5,846	1,114	546	7,780	40,720



One entire family of seven infected with trachoma. They were all treated and cured at the Lebanon Clinic.

The State Board of Health Laboratory at Jefferson City is at your service.

A copy of the new Missouri Health Manual, outlining Missouri Health Laws and Regulations of the State Board of Health, will be sent on application.

Annual registration of physicians and midwives with the local registrars of Vital Statistics is required by the State law. Co-operation of the physicians in complying with this law will assist greatly in the medical survey now being conducted. There is no fee for registration. See Revised Statutes, 1919, Sec. 5811.

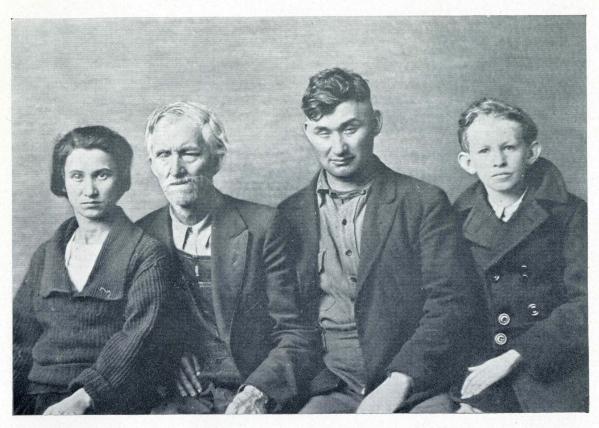
A contagious disease chart is being furnished by the State Board of Health of Missouri for posting in every school in the state.

Be sure and use biologics marked "The State Board of Health of Missouri." They are just as efficient and much cheaper.

HEALTH NEWS

The number of cases of contagious disease reported to the central office each month will be of interest.

Here is the quarterly report for January, February and March, 1924:



Three generations of trachoma—father, son, daughter and grandson. This is typical of many families where this disease had infected three generations.

CASES REPORTED FOR JANUARY, FEBRUARY AND MARCH, 1924.

1924.	Anthrax	Chickenpox	Diphtheria	Throat	Glanders	Influenza	Leprosy	Measles	Meningitis	Mumps	Ophthalmia	Plague	Pneumonia	Poliomyelitis	Rabies	Scarlet Fever	Smallpox	Tetanus	Trachoma	Tuberculosis	Typhoid Fever	Typhus Fever	Whooping Cough	Trysipelas
Jan. 5	0	68	98	0	0	22	0	557	1	28	1	0	32	0	0	118	14	1	4	122	10	0	82	0
Jan. 12	1	89	83	2	1	26	0	600	1	39	0	0	7	0	0	138	8	0	1	61	6	C	85	0
Jan. 19	0	68	94	0	0	. 33	0	667	3	32	1	0	30	0	0	119	4	1	4	40	5	0	94	0
Jan. 26	0	78	79	4	0	21	0	861	2	27	0	0	26	0	0	127	6	1	0	59	5	0	106	1
Feb. 2	0	80	87	1	0	37	0	866	1	71	0	0	44	0	0	136	16	0	5	47	5	0	63	0
Feb. 9	0	68	58	3	0	44	0	668	2	41	0	0	40	0	. 1	133	15	0	8	51	7	0	64	0
Feb. 16	0	64	70	5	0	11	0	771	0		0	0	12	1	0	176	5	1	7	46	2	0	64	0
Feb. 23	0	43	76	7	0	25	0	427	0		0	0	28	0	0	135	14	1	4	35	3	0	72	0
Mar. 1	0	43	60	0	0	20	0		0		1	0	20	0	0	151	33	0	3	38	2	0	59	0
Mar. 8	0	64	71	1	0	65	0	456	0		0	0	33	0	0	139	51	1	1	48	6	0	74	0
Mar. 15	0	62	57	0	0	7	0	373		103	0	0	25	0	0	164	40	0	3	38	4	0	88	0
Mar. 22	0	62	50	1	0	4	0	433		116	0	0	11	0	0	146	78	0	0	41	4	0	65	1
Mar. 29	0	17	27	0	0	19	0	365	0	89	0	0	32	0	0	79	29	0		-8	9	0	27	0
Total 1924 Total	1	806	910	24	1	334	0	7596	14	874	3	0	340	1	1	1761	314	6	41	634	68	0	944	2
1923	0	689	759	227	0	8186	0	4835	12	182	4	0	371	0	2	982	208	4	143	373	25	0	375	0



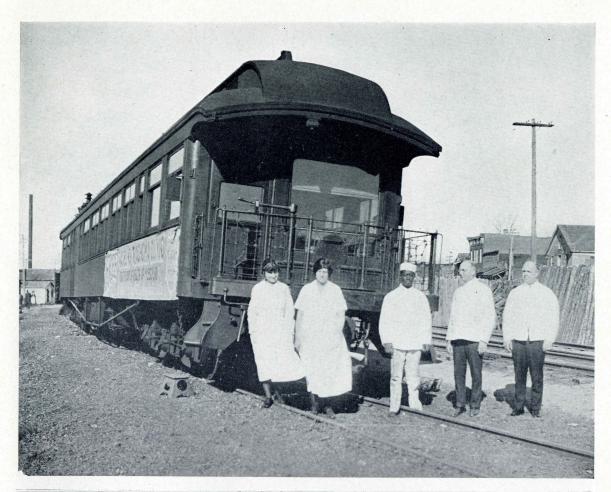
This photo shows brother and two sisters who have paid the great price. Total loss of sight from trachoma. Our clinic reached them too late. No greater sermon on disease prevention could be preached than to view these unfortunate people. Not only are they deprived of the light of day, but they have suffered for many years untold agony from ulcerations of cornea, entropian and other complications, that follow in the wake of this preventive, catching disease. In conversation with these unfortunate individuals, who are now on the blind pension rolls, we have the statement that their greatest wish is that the State Board of Health had made possible 30 years ago the relief that they are offering to Trachoma sufferers today.

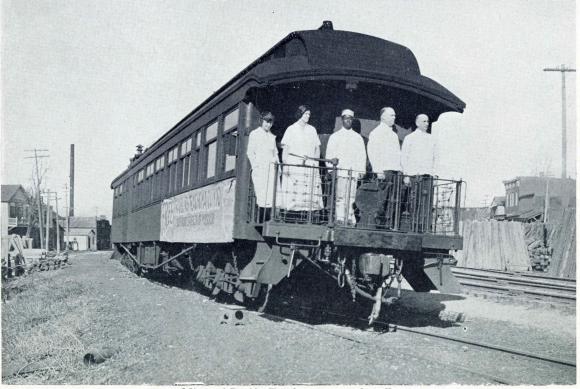
MISSOURI'S MOTTO

"Salus populi suprema lex esto"
(The Welfare of the People is the Supreme Law)

The purpose of this bulletin, which is to be issued quarterly, is to disseminate information regarding the prevalence of preventable diseases and the best methods of their suppression, to record progress in sanitation and the control of preventable diseases and to acquaint the profession with the services they may obtain from the State Board of Health; all with the aim of bringing about better health protection for the people of Missouri.

CORTEZ F. ENLOE, M. D.,
State Health Commissioner.





Missouri Pacific Trachoma car and staff.



This Photo shows two brothers blind from trachoma. The wife and children of one of them are infected.



A typical group of trachoma patients who have been operated in one of the three-day clinics. The young lady and the young man at the left are clinic assistants.